

REMARKS

Claims 1-21 are pending in the application. Claims 1-21 have been rejected.

The specification and drawings have been amended to correct an inconsistency in the Specification in which a reference numeral 70 refers to both a “dialog management system” (See, e.g., Specification as originally filed, page 6, line 19) and a “domain model” (See, e.g., Specification as originally filed, page 11, line 3). To correct the inconsistency, the reference numeral associated with the “domain model” has been changed to “71” as shown above by the mark-ups in the amendments to the specification. Also, Fig. 1 of the drawings has been amended to include a block illustrating the domain model 71 in communication with a digital processor 12 which hosts and executes a speech center system 20. These amendments are supported by the Specification as originally filed at least at page 11, lines 17-19 and page 14, lines 10-13. No new matter is being introduced by way of these amendments to the specification and drawings. Acceptance is respectfully requested.

Claim rejections under 35 U.S.C. § 101

Claims 13-18 and 20 have been rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

According to M.P.E.P. 2106(IV)(B)(1), functional and non-functional descriptive material “are non-statutory when claimed as descriptive material per se.” However, “[w]hen functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.” *Id.* In other words, “a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is, thus, statutory.” MPEP 2106 (IV)(B)(1)(a).

Claim 13 is directed to a “computer program product” that includes a “tangible computer usable program product” and “a set of computer program instructions embodied on the tangible computer usable program product.” The claimed computer usable program product is a

computer-readable medium encoded with a computer program, and is thus statutory. The Examiner correctly notes that the specification as originally filed at page 7 indicates that the claimed computer usable program product may be embodied as a propagated signal on a propagation medium. At the same time, however, the specification as originally filed at page 6, lines 27-29 also indicates that the computer usable program product may be embodied in a computer usable medium such as one or more CD-ROMs. Also, in the Office Action dated October 3, 2005, the Examiner suggested that the term “tangible” be placed in front of “computer usable program product” in line 2 of claim 13. Thus, claim 13 as previously amended makes clear that the computer usable program product may be embodied in a physical computer-readable medium, which is statutory subject matter. Therefore, Applicants respectfully request that the rejection of base claim 13 under 35 U.S.C. 101 be withdrawn. Acceptance is respectfully requested.

Claims 14-18 include all the limitations of base claim 13. Therefore, Applicants respectfully request that the rejection of claims 14-18 under 35 U.S.C. 101 be withdrawn for at least the same reasons.

The Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility states that “it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in section 101.” Official Gazette Notices, page 55, November 22, 2005.

“On the other hand, from a technological standpoint, a signal encoded with functional descriptive material is similar to a computer-readable memory encoded with functional descriptive material, in that they both create a functional interrelationship with a computer. In other words, a computer is able to execute the encoded functions, regardless of whether the format is a disc or a signal.” Id. at 57.

Applicants agree that a claim reciting a signal encoded with functional descriptive material by itself does not constitute patentable subject matter under 35 U.S.C. § 101. Such a signal simply represents an expression of a computer program. However, a computer-readable or computer-usable signal encoded with computer program instructions to interact with a computer and the elements of the computer (e.g., the prioritized queue) defines “structural and functional

interrelationships between the computer program and other claimed elements of the computer which permit the computer program's functionality to be realized." MPEP 2106 (IV)(B)(1)(a).

Applicants recognize that a propagated signal as claimed in claim 20 is not tangible. Accordingly, Applicants have amended base claim 20 to delete the term tangible. However, such a signal, when used in conjunction with a computer, produces a tangible result. Base claim 20 as now amended is directed to computer program instructions embodied on a computer usable propagated signal product that are executed on a computer to manage a dialog between the computer and a user of the computer (i.e., to produce a tangible and concrete result).

Therefore, Applicants respectfully request that the § 112 rejection of base claim 20 be withdrawn. Acceptance is respectfully requested.

Claim rejections under 35 U.S.C. § 112

Claim 21 has been rejected under 35 U.S.C. § 112 because there is insufficient antecedent basis for the limitation "the domain model" in line 1 of the claim.

Claim 21 is being amended to delete this limitation. Claim 21 is further being amended to include the limitation "dialog manager and a turn manager have access to." Claim 21 as now amended is supported by the specification as originally filed at least at pages 6 and 11-14 and by Figs. 1 and 4. Therefore, Applicants respectfully request that the rejection of claim 21 under 35 U.S.C. 112 be withdrawn. Acceptance is respectfully requested.

Claim rejections under 35 U.S.C. § 102

Claims 1-21 have been rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al. (U.S. Pat. No. 6,505,162).

In one embodiment, Applicants provide a computerized interface for managing a dialog between a computer and a user of the computer. As shown in Fig. 4 of Applicant's drawings, the computerized interface includes a prioritized speak queue 74, a dialog manager 56, and a turn manager 72. The prioritized speak queue 74 retains responses generated by the computer in response to spoken input from the user received by the computer through an audio input device. See Specification as originally filed, page 14, lines 25-26. The dialog manager 56 places the generated responses in the prioritized speak queue.

The turn manager 72 prioritizes audible rendering of the responses from the prioritized speak queue through an audio output device according to rules other than the order in which the responses are added to the prioritized speak queue and according to the priority of corresponding contexts associated with the responses in a context priority queue 78. See Specification as originally filed, page 18, lines 18-29. In this manner, the turn manager conducts a dialog in a polite non-interruptive manner that is subject to control by the user including allowing the user to change subjects and allowing the user to interrupt the dialog but not allowing the audible rendering of a response to interrupt the user. See Specification as originally filed, page 3, lines 2-12 and page 5, lines 1-8.

In contrast, Wang discloses a dialogue management system that is based on the searching of base tables. Each base table, such as the base table illustrated in Fig. 11(c), stores the dialogue states, a number of domain parameters, and a plurality of response actions corresponding to each dialogue state. At the beginning of a dialogue, the values of the system state are empty. Based on input from a user, the dialogue manager then updates the system state tables as shown in Fig. 8(a). When the dialogue manager finds a matching dialogue state in the base table illustrated in Fig. 11(a), such as S1, the dialogue manager enters the base table of a sub-dialogue as shown in Fig. 11(c) according to the response action of dialogue state S1. The dialogue manager also pushes the current base table (shown in Fig. 11(a)), the dialogue state (T1), and the goal (e.g., “ticket order”) onto the stack as shown in Fig. 8(a).

The dialogue manager then searches for a matching state in the base table shown in Fig. 11(c). This process continues until the dialogue manager encounters a response action of returning to the previous base table. In this case, the information that was most recently pushed onto the stack is popped up. See col. 8, lines 36-38. Thus, Wang essentially discloses a dialogue management system that searches base tables to find matching dialogue states. The dialogue manager derives response actions as a function of the dialogue state from the base tables.

The dialogue management system, however, does not store response strings that can be submitted to a text-to-speech service, in a prioritized speak queue. It instead stores the current base table, the dialogue state, and the goal in a stack. The response actions must be derived from matching the dialogue state with the dialogue states in the current base table. Therefore, Wang does not disclose a prioritized queue that includes responses that can be “spoken” by a text-to-

speech device as claimed in now amended Claim 1 (“a prioritized speak queue”). Support for this amendment is found in the Specification as originally filed at least at page 6, lines 22-26 and in the drawings at Fig. 1, reference numeral 74.

Moreover, Wang does not support interruptions by the user so that if a response is interrupted by the user, the turn manger may reschedule the full response on the speak queue for delivery at a later, more appropriate time. Wang simply discloses apologizing when a request cannot be satisfied, but does not address interruptions by a user. Thus, Wang does not disclose “the turn manager conducting the dialog in a polite non-interruptive manner that is subject to control by the user including . . . allowing the user to interrupt the dialog but not allowing the audible rendering of a response to interrupt the user” as recited in now amended Claim 1

Since Wang does not disclose the elements of now amended Claim 1, Applicants respectfully request that the rejection of Claim 1 be withdrawn.

Independent Claims 7, 13, 19, and 20 have been amended to include similar limitations as base Claim 1 and are allowable for the same reasons as Claim 1. Therefore, Applicants respectfully request that the rejection of Claims 7, 13, 19 and, 20 be withdrawn.

Since Claims 2-6 and 21 depend from now amended base Claim 1, Claims 8-12 depend from now amended base Claim 7, and Claims 14-18 depend from now amended base Claim 13, they are allowable for the same reasons. Therefore, Applicants respectfully request that the rejection of Claims 2-6, 8-12, 14-18, and 21 be withdrawn.

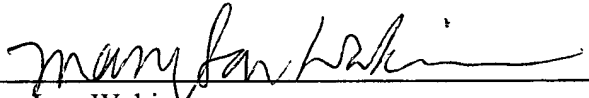
Accordingly, the §102 rejection of Claims 1-21 is believed to be overcome. Acceptance is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all pending claims (Claims 1-21) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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Amendments to the Drawings

The attached sheets of drawings include changes to Fig. 1 as detailed in the Remarks section below. Replacement sheets for Figs. 1-5 replacing prior filed Figs. 1-5 are attached.

Attachment: Replacement Sheet